# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2008 Certified Company
**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No: CTCE/BBMP/W.No.03/MSR/CEMENT/2014-15 Date: 03.04.2014

## TEST REPORT

| | | |
|---|---|---|
| CLIENT | : | **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore. |
| AGENCY | : | **Mr. M. Sumashekarareddy,** Contractor, Bangalore. |
| NAME OF THE WORK | : | Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03, BBMP, Bangalore. |
| REFERENCE | : | BBMP/AEE/YNSD/WO/491/2014-15 |
| SAMPLE ID | : | CEMENT |
| SAMPLES SUPPLIED BY | : | AGENCY |

The results of the tests conducted on the cement sample are as follows:

| Sl.No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 1989-2013 |
|---|---|---|---|---|
| 1 | Standard Consistency | IS-4031 (Part -4) | 31.00 % | - |
| 2 | a) Initial Setting Time | IS-4031 (Part -5) | 145 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) | 485 Minutes | Not More than 600 Minutes |
| 3 | Soundness by the Le-Chatelier method | IS-4031 (Part 3) | 1 mm | Not more than 10 mm |

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Job No: CTCE/BBMP/WNo.03/MSR/SAND/2014-15 : 03.04.2014

## TEST REPORT ON FINE AGGREGATES
### IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer**, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : **Mr. M. Somashekarareddy**, Contractor, Bangalore.

Name of Work : Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/WO/491/2014-15

Date of Testing : 03.04.2014

Material : Sand

Total Wt. of Aggregates in gms **2000**

| Is Sieve Size in mm | Weight Retained (gm) | Retained Weight in % | Cumulative Retained Weight in % | Cumulative Weight Passing in % | Spec.Limits For Zone-II |
|---|---|---|---|---|---|
| 10 | 0 | 0 | 0 | 100 | 100 |
| 4.75 | 85 | 4.25 | 4.25 | 95.8 | 90-100 |
| 2.36 | 250 | 12.50 | 16.75 | 83.3 | 75-100 |
| 1.18 | 392 | 19.60 | 36.35 | 63.7 | 55-90 |
| 600 Micron | 493 | 24.65 | 61.00 | 39.0 | 35-59 |
| 300 Micron | 425 | 21.25 | 82.25 | 17.8 | 8-30 |
| 150 Micron | 299 | 14.95 | 97.20 | 2.8 | 0-10 |

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Job No: CTCE/BBMP/W.No.03/MSR/AGG/2014-15 : 03.04.2014

## TEST REPORT ON COARSE AGGREGATES

IS 383-1970 (RA- 2002)

Client : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Mr. M. Somashekarareddy, Contractor, Bangalore.

Name of Work : Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/WO/491/2014-15

Date of Testing : 03.04.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms 25000

| Is Sieve Size in mm | Weight Retained (gm) | Retained Weight in % | Cumulative Retained Weight in % | Cumulative Weight Passing in % | Spec.Limits |
|---|---|---|---|---|---|
| 80 | 0 | 0 | 0 | 100 | 100 |
| 40 | 900 | 3.60 | 3.60 | 96.40 | 95-100 |
| 20 | 15850 | 63.40 | 67.00 | 33.00 | 30-70 |
| 10 | 3850 | 15.40 | 82.40 | 17.60 | 10-35 |
| 4.75 | 3305 | 13.22 | 95.62 | 4.38 | 0-5 |

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

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Job No: CTCE/BBMP/WNo.03/MSR/AGG/2014-15 : 03.04.2014

## TEST REPORT ON COARSE AGGREGATES
### IS 383-1970 (RA- 2002)

Client : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Mr. M. Somashekarareddy, Contractor, Bangalore.

Name of Work : Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/WO/491/2014-15

Date of Testing : 03.04.2014

Material : 20mm Aggregates

Total Wt. of Aggregates in gms= 5000

Tabel - 1

| Is Sieve Size in mm | Weight Retained (gm) | Retained Weight in % | Cumulative Retained Weight in % | Cumulative Weight Passing in % | Spec.Limits |
|---|---|---|---|---|---|
| 40 | 0 | 0 | 0 | 100 | 100 |
| 20 | 135 | 2.70 | 2.7 | 97.30 | 95-100 |
| 10 | 3255 | 65.10 | 67.8 | 32.20 | 25-55 |
| 4.75 | 1315 | 26.30 | 94.1 | 5.90 | 0-10 |

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Job No.: CTCE/BBMP/WNo.03/MSR/STEEL/2014-15 28.04.2014

## TEST REPORT ON REINFORCEMENT STEEL.

Client : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Mr. M. Somashekarareddy, Contractor, Bangalore.

Name of the Work : Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/WO/491/2014-15

Date of Test : 28.04.2014

Technical Reference : IS: 1786-2008

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress N/mm² | Tensile strength (Ultimate stress) N/mm² | Elongation percent gauge length | | |
| 1 | 8 | 0.40 | 510 | 552 | 13.05 | O.K | O.K |

Bangalore

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Job No: CTCE/BBMP/W.No.03/MSR/STEEL/2014-15 28.04.2014

## TEST REPORT ON REINFORCEMENT STEEL

Client : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Mr. M. Sumashekarareddy, Contractor, Bangalore.

Name of the Work : Construction of Samudaya Bhavan first floor as 4th Phase in Ward No.03, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/WO/491/2014-15

Date of Test : 28.04.2014

Technical Reference : IS: 1786-2008

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress N/mm² | Tensile strength (Ultimate stress) N/mm² | Elongation percent gauge length | | |
| 1 | 10 | 0.62 | 513 | 556 | 13.20 | O.K | O.K |

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Job No.: CTCE/BBMP/WNo.03/MSR/STEEL/2014-15 28.04.2014

## TEST REPORT ON REINFORCEMENT STEEL

Client : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Mr. M. Somashekarareddy, Contractor, Bangalore.

Name of the Work : Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/WO/491/2014-15

Date of Test : 28.04.2014

Technical Reference : IS: 1786-2008

| Sl. No | Nominal size (dia) (mm) | Mass per metre (Kg/mtr) | TENSILE STRENGTH | | | Bend Test | Rebend Test |
|---|---|---|---|---|---|---|---|
| | | | 0.20% proof stress/Yield stress N/mm² | Tensile strength (Ultimate stress) N/mm² | Elongation percent gauge length | | |
| 1 | 12 | 0.89 | 515 | 558 | 13.35 | O.K | O.K |

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
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**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005


Job No: CTCE/BBMP/WNo.03/MSR/BRICKS/2014-15

Date: 19.04.2014

## TEST REPORT

| | | |
|---|---|---|
| CLIENT | : | **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore. |
| AGENCY | : | **Mr. M. Somashekarareddy,** Contractor, Bangalore. |
| NAME OF THE WORK | : | Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03, BBMP, Bangalore. |
| REFERENCE | : | BBMP/AEE/YNSD/WO/491/2014-15 |
| SAMPLE ID | : | BRICKS |
| SAMPLES SUPPLIED BY | : | CLIENT |

The results of the tests conducted on the samples are as follows:

| Sl. No | Description | Test method as per IS Codes | Result | Requirement as per IS 1077-1992 (Rev-5) |
|---|---|---|---|---|
| 1 | Compressive Strength Of Bricks | IS 3495-1992 (Part-1) | 5.70 N/mm² | Class designation 5.0 |
| 2 | Water Absorption of Bricks | IS 3495-1992 (Part – 2) | 9.50 % | Not more than 20 % |
| 3 | Efflorescence of Bricks | IS 3495-1992 (Part – 3) | Moderate | Up to 12.5 Class |
| 4 | Dimensional Analysis of Bricks (minimum Sampling is 20 Nos) | IS 1077-1992 (Rev – 5) | | |
| (a) | Measurement of Length in mm | | 4670 mm | (4600 ± 80 mm) |
| (b) | Measurement of Width in mm | | 2230 mm | (2200 ± 40 mm) |
| (c) | Measurement of Height in mm | | 1425 mm | (1400 ± 40 mm) |

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Job No.: CTCE/BBMP/W.No.03/MSR/CUBE/2014-15 27.05.2014

## TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : **Mr. M. Somashekarareddy,** Contractor, Bangalore.

Name of the work : Construction of Samudaya Bhavan first floor in 4th Phase in Ward No.03 BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/WO/491/2014-15

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 $mm^2$

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : $M_{20}$

Compressive Strength as on : 28th day

| Sl.No. | Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 29.04.2014 | 27.05.2014 | 8.135 | 478.3 | 21.26 |
| 2 | 29.04.2014 | 27.05.2014 | 8.265 | 495.3 | 22.01 |
| 3 | 29.04.2014 | 27.05.2014 | 8.374 | 519.3 | 23.08 |

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